FARM BUSINESS MANAGEMENT

Information Update

Manitoba Agriculture
Farm Management

Date December, 1985

FARM PLANNING GUIDE

1986 CROP ESTIMATES

The projected crop costs enclosed in this budget have been prepared to offer a guideline only, for calculating production costs on a continuous cropping basis.

The cash cost inputs associated with growing a crop in Manitoba are substantial. This makes it extremely important for the farm manager to do detailed planning in order that he may choose the combination of crops that will maximize his profits. Detailed planning is also necessary when arranging for a line of credit that would be required to finance the inputs. The importance of good financial management can be emphasized by the observation that a 400 hectare (1000 acre) farm would require somewhere in the vicinity of $80,000 for cash inputs alone.

The following budgets are estimates of the cost of producing several different crops in 1986. General departmental recommendations are assumed in using fertilizers and chemical inputs. The figures provide an economic evaluation of the crops and estimate the yields required to cover all costs plus give a return to labor, management and investment. To estimate a cash flow budget the actual payments on principal and interest may be substituted for the fixed costs. As well, an estimate has to be made of family living costs, funds required for capital purchases and a cost analysis of livestock enterprises on the farm if not a straight grain farm.

These budgets may be adjusted by putting your figures in the appropriate column. Producers are encouraged to determine their own costs of production for various crops, because of different soil types, climatic conditions, and agronomic practices found in Manitoba.

Also producers fixed costs may vary greatly from farm to farm due to original purchase price, financial arrangements and equity in the business.

MG-2511

CROP PRODUCTION COSTS 1985

	Wheat	Barley	Canola	Flax	Rye
	$	$	$	$	$
OPERATING COSTS:					
Seed & Treatment	18.55	13.90	8.15	29.65	13.90
Fertilizer - N	43.25	43.25	39.75	37.05	43.25
- P_2O_5	22.85	22.85	13.85	0.0	13.85
- other			15.95		
Chemicals	45.70	40.75	47.45	44.45	6.15
Fuel	27.20	27.20	27.20	27.20	27.20
Machinery Operating Costs	17.30	17.30	17.30	17.30	17.30
Insurance	15.20	14.85	25.45	18.15	16.70
Miscellaneous	14.80	14.80	14.80	14.80	14.80
Drying	0.0	0.0	0.0	0.0	0.0
Interest on Operating	12.30	11.70	12.60	11.30	9.20
TOTAL OPERATING COSTS	217.15	206.60	222.50	199.90	162.35
FIXED COSTS:					
Land Investment Costs	79.10	79.10	79.10	79.10	79.10
Machinery Depreciation	34.60	34.60	34.60	34.60	34.60
Machinery Investment	27.65	27.65	27.65	27.65	27.65
Storage Costs	7.05	7.05	7.05	7.05	7.05
Labor and Management	39.50	39.50	39.50	39.50	39.50
TOTAL FIXED	187.90	187.90	187.90	187.90	187.90
TOTAL COST	405.05	394.50	410.40	387.80	350.25
BREAKEVEN ANALYSIS					
Price/Unit	$156.13/t	$103.34/t	$308.66/t	$295.26/t	$98.45/t
Breakeven Yield for Operating Costs	1.391 t	2.000 t	0.721 t	0.677 t	1.649 t
Breakeven Yield for Total Costs	2.595 t	3.818 t	1.330 t	1.314 t	3.558 t

GUIDELINES (DOLLARS PER HECTARE)

Corn $	Sunflowers $	Peas $	Lentils $	Buckwheat $	Navy Beans $	My Farm
42.65	29.65	55.60	44.45	24.70	54.45	_____
61.75	37.05	0.0	0.0	33.95	0.0	_____
27.65	24.20	24.20	24.20	24.20	24.20	_____
19.25	10.60	15.95	15.95	9.60	15.95	_____
80.75	34.60	39.55	49.45	34.60	134.65	_____
32.10	29.65	29.65	29.65	27.20	28.40	_____
27.20	23.20	21.00	21.00	17.30	23.45	_____
21.60	12.35	21.00	24.95	20.90	25.10	_____
17.30	17.30	17.30	17.30	17.30	17.50	_____
61.75	14.80	0.0	0.0	0.0	0.0	_____
22.65	13.55	13.10	13.25	12.70	19.42	_____
414.65	246.95	237.35	240.20	222.45	343.12	_____
93.90	79.10	86.50	86.50	79.10	93.90	_____
49.40	42.00	37.05	37.05	36.55	44.45	_____
39.50	33.60	29.65	29.65	27.65	35.55	_____
14.10	7.05	7.05	7.05	7.05	7.05	_____
39.50	39.50	39.50	39.50	39.50	39.50	_____
236.40	201.25	199.75	199.75	189.85	220.45	_____
651.05	448.20	437.10	439.95	412.30	563.57	_____
PER HECTARE YIELDS						
$118.10/t	28.6/kg	$220.45/t	39.2¢/kg	$298.53	54.8¢/kg	_____
3.510 t	863 kg	1.077 t	613 kg	0.745 t	626 kg	_____
5.513 t	1567 kg	1.983 t	1122 kg	1.382 t	1028 kg	_____

CROP PRODUCTION COSTS 1985

	Wheat	Barley	Canola	Flax	Rye
	$	$	$	$	$
OPERATING COSTS:					
Seed & Treatment	7.50	5.63	3.30	12.00	5.63
Fertilizer - N	17.50	17.50	16.10	15.00	17.50
- P_2O_5	9.24	9.24	5.60	0.0	5.60
- other			6.45		
Chemicals	18.50	16.50	19.20	18.00	2.50
Fuel	11.00	11.00	11.00	11.00	11.00
Machinery Operating Costs	7.00	7.00	7.00	7.00	7.00
Insurance	6.15	6.00	10.30	7.35	6.75
Miscellaneous	6.00	6.00	6.00	6.00	6.00
Drying	0.0	0.0	0.0	0.0	0.0
Interest on Operating	4.97	4.73	5.10	4.58	3.72
TOTAL OPERATING COSTS	87.86	83.60	90.05	80.93	65.70
FIXED COSTS:					
Land Investment Costs	32.00	32.00	32.00	32.00	32.00
Machinery Depreciation	14.00	14.00	14.00	14.00	14.00
Machinery Investment	11.20	11.20	11.20	11.20	11.20
Storage Costs	2.85	2.85	2.85	2.85	2.85
Labor and Management	16.00	16.00	16.00	16.00	16.00
TOTAL FIXED	76.05	76.05	76.05	76.05	76.05
TOTAL COST	163.91	159.65	166.10	156.98	141.75

BREAKEVEN ANALYSIS

Price/Unit	$4.25/bu.	$2.25/bu.	$7.00/bu.	$7.50/bu.	$2.50/bu.
Breakeven Yield for Operating Costs	20.7 bu.	37.2 bu.	12.9 bu.	10.8 bu.	26.3 bu.
Breakeven Yield for Total Costs	38.6 bu.	71.0 bu.	23.7 bu.	20.9 bu.	56.7 bu.

GUIDELINES (DOLLARS PER ACRE)

Corn	Sunflowers	Peas	Lentils	Buckwheat	Navy Beans	My Farm
$	$	$	$	$	$	
17.25	12.00	22.50	18.00	11.00	22.00	_____
25.00	15.00	0.0	0.0	13.75	0.0	_____
11.20	9.80	9.80	9.80	9.80	9.80	_____
7.80	4.30	6.45	6.45	3.90	6.45	_____
32.70	14.00	16.00	20.00	14.00	54.50	_____
13.00	12.00	12.00	12.00	11.00	11.50	_____
11.00	9.50	8.50	8.50	7.00	9.50	_____
8.75	5.30	8.50	10.10	8.45	10.15	_____
7.00	7.00	7.00	7.00	7.00	7.00	_____
25.00	6.00	0.0	0.0	0.0	0.0	_____
9.16	5.48	5.30	5.36	5.15	7.85	_____
167.86	100.38	96.05	97.21	91.05	138.75	_____
38.00	32.00	35.00	35.00	32.00	38.00	_____
20.00	17.00	15.00	15.00	14.80	18.00	_____
16.00	13.60	12.00	12.00	11.20	14.40	_____
5.70	2.85	2.85	2.85	2.85	2.85	_____
16.00	16.00	16.00	16.00	16.00	16.00	_____
95.70	81.45	80.85	80.85	76.85	89.25	_____
263.56	181.83	176.90	178.06	167.90	228.00	_____

PER HECTARE YIELDS

$3.00/bu.	13¢/lb.	$6.00/bu.	18¢/lb.	$6.50/bu.	25¢/lb.	_____
56.0 bu.	772 lb.	16.0 bu.	540.1 lb.	14.0 bu.	555 lb.	_____
87.9 bu.	1399 lb.	29.5 bu.	989.1 lb.	25.8 bu.	912 lb.	_____

CROP BUDGET ASSUMPTIONS

1) Seed	Rate/ha (acre)	Price/Unit	Price/ha (acre)
Wheat	84.2 kg (1.25 bu.)	22¢/kg ($6.00/bu.)	$18.50 ($7.50)
Barley	80.7 kg (1.5 bu.)	$17.20/kg ($3.75/bu.)	$13.90 ($5.63)
Canola	6.8 kg (6 lbs.)	$1.20/kg (55¢/lb.)	$ 8.15 ($3.30)
Flaxseed	45 kg (40 lbs.)	65¢/kg (30¢/lb.)	$29.64 ($12.00)
Rye	78.6 kg (1.25 bu.)	17.6¢/kg ($4.50/bu.)	$13.90 ($5.63)
Corn	56,800 plants (23,000 plants)	$60.00/80,000 ($60.00/80,000)	$42.65 ($17.25)
Sunflowers	6.7 kg (6 lbs.)	4.42¢/kg ($2.00/lb.)	$29.65 ($12.00)
Peas	165 kg (2.5 bu.)	30¢/kg ($9.00/bu.)	$55.60 ($22.50)
Lentils	67 kg (60 lbs.)	66¢/kg (30¢/lb.)	$44.45 ($18.00)
Buckwheat	54 kg (1.0 bu.)	50.4¢/kg ($11.00/bu.)	$27.17 ($11.00)
Navy Beans	45 kg (40 lbs.)	$1.21/kg (55¢/lb.)	$54.45 ($22.00)

2) Fertilizer - kg/ha (lbs/acre)	Nitrogen 59¢/kg (25¢/lb.)	Phosphorous 62¢/kg (28¢/lb.)	Potash 0.286¢/kg (13¢/lb.)	Sulfur 0.374¢/kg (17¢/lb.)
Wheat	78 (70)	37 (33)	-- --	-- --
Barley	78 (70)	37 (33)	-- --	-- --
Canola	90 (80)	22 (20)	-- --	17 (15)
Flaxseed	56 (60)	-- --	-- --	-- --
Rye	67 (70)	22 (20)	-- --	-- --
Corn	110 (100)	45 (40)	67 (60)	-- --
Sunflowers	67 (60)	40 (35)	22 (20)	11 (10)
Peas	-- --	40 (35)	34 (30)	17 (15)
Lentils	-- --	40 (35)	34 (30)	17 (15)
Buckwheat	62 (55)	40 (35)	34 (30)	-- --
Navy Beans	-- --	40 (35)	34 (30)	17 (15)

* FERTILIZER RATES ARE BASED ON RECOMMENDATIONS FROM UNIVERSITY OF MANITOBA SOIL TESTING LAB.

3) Chemical & Insecticide Control	Cost/Hectare	(Cost/Acre)
Wheat:		
Post-emergence Broadleaf	$11.10	($ 4.50)
Wild Oat & Millet	34.60	(14.00)
Barley:		
Post-emergence Broadleaf	6.15	(2.50)
Wild Oat & Millet	34.60	(14.00)
Canola:		
Seed Treatment	12.85	(5.20)
* Wild Oat & Millet	34.60	(14.00)
Fungicide/Treatment	54.35	(22.00)
Flaxseed:		
Wild Oat & Millet	34.60	(14.00)
Post-emergence Broadleaf	9.85	(4.00)
Rye:		
Post-emergence Broadleaf	6.15	(2.50)
Corn:		
Pre-emergence Part Band	29.65	(12.00)
Pre-emergence	61.75	(25.00)
* Post-emergence Broadleaf	9.50	(3.85)
Corn Borer/Treatment	27.15	(11.00)
Sunflowers:		
Wild Oat & Millet	34.60	(14.00)
Peas:		
Wild Oat & Millet	34.60	(14.00)
Post-emergence Broadleaf	4.95	(2.00)
Lentils:		
Wild Oat & Millet	34.60	(14.00)
Post-emergence Broadleaf	14.85	(6.00)
Buckwheat:		
Wild Oat & Millet	34.60	(14.00)
Navy Beans:		
Wild Oat & Millet	34.60	(14.00)
Post - emergence Broadleaf	45.70	(18.50)
Fungicide/Treatment	54.35	(22.00)

* NOT INCLUDED IN BUDGET

4) Machinery Fuel & Opertaing Costs:

- Include repairs, licences, insurance, etc. This figure varies for individual farms depending on management, machine age and use and farm size. This figure averages between $24.00-$44.00/hectare ($10.00-$18.00/acre).

5) Crop Insurance: (1985 rates)

- Risk Area #6 at the medium coverage dollar rate plus hail spot loss and part II insurance for wheat, barley, canola, flax and rye.

- Risk Area #11 at the medium coverage dollar rate on a "B" soil zone plus hail spot loss & part II insurance, for sunflowers peas, lentils, buckwheat, beans and Corn Area A.

6) Miscellaneous

- Overhead expenses such as hydro, telephone, accounting, etc. assumed at $14.85/hectare ($6/acre) to $17.30/hectare ($7/acre) for special crops.

7) Approximate Drying Costs:

- Have been included for corn and sunflowers, however, drying costs may be included for other crops depending upon the weather and farming practises.

8) Interest On Operating:

- Interest charges on operating costs are calculated at 12% for six months.
- Interest costs on drying costs for corn and sunflowers are not included.

9) Taxes:

- Depending on soil classification, etc.
- Taxes are included in the fixed land investment costs.

10) Land Investment Cost:

- Depending on individual farm land values.
- Based on land ownership costs and general rental charges.

11) Machinery:

Depreciation: 8 years and a 20% salvage value.

Investment: 8% opportunity cost on the total investment on machinery.

	Investment/Area	
	Per Hectare	(Per Acre)
Wheat	$346	($140)
Barley	346	(140)
Canola	346	(140)
Flaxseed	346	(140)
Rye	346	(140)
Corn	495	(200)
Sunflowers	420	(170)
Peas	370	(150)
Lentils	370	(150)
Buckwheat	345	(140)
Navy Beans	445	(180)

Example

Wheat: Depreciation $\frac{\$346 - \$70}{8 \text{ years}}$ = $ 34.60/hectare

$\frac{(\$140 - \$28)}{8 \text{ years}}$ = $14.00/acre

Investment $346 X 8% = $27.68/hectare

$140 X 8% = $11.20/acre

12) Storage:

- All grain storage was based on 20 year depreciation and 8% investment cost.
- A salvage value of 10% was used on all grain storage.
- Farm storage requirements were assumed to be 30 bushels/acre costing $1/bushel for 75% of the storage and $1.25/bushel for 25% aerated storage.
- Storage for corn was calculated at 60 bushels/acre.

Example - Wheat

Depreciation $\frac{\$30 - \$3}{20 \text{ years}} = \$1.35$

Investment $\frac{\$30 + \$3}{2} \times 8\% = \frac{\$1.32}{\$2.67} \times 75\% = \$2.00$

Aeration Bins (1/4)

Depreciation $\frac{\$30.50 - \$3.75}{20 \text{ years}} = \$1.69$

Investment $\frac{\$30.75 + \$3.75}{2} \times 8\% = \frac{\$1.65}{\$3.34} \times 25\% = \$0.85$

$\$2.85$

13) Labor & Management

- It depends upon the individual farm size, type of enterprises, and labor requirements.

  Assumed cost - $39.50/hectare ($16/acre).

  This calculation could be equal to paid wages plus personal and family withdrawals from the farm business.

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